



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,735	12/16/2004	Thomas Busse	884A.0063.U1(US)	1332
29683 7590 09/25/2007 HARRINGTON & SMITH, PC 4 RESEARCH DRIVE SHELTON, CT 06484-6212			EXAMINER LU, ZHIYU	
			ART UNIT 2618	PAPER NUMBER
			MAIL DATE 09/25/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/518,735	Applicant(s) BUSSE, THOMAS	
	Examiner Zhiyu Lu	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-16, 18-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-16, 18-20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/02/2007 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 18 and 22 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-6, 8, 16, 18-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrus et al. (US Patent#5410305).

Art Unit: 2618

Regarding claim 1, Barrus et al. teach a device (keyboard) having a first mode (sleep mode) in which the device does not perform a first function (output user's input) and a second mode (active/working mode) in which the device does perform the first function wherein the device has a touch-entry user input device for user input and is arranged, when in the first mode, to initiate exit (wake up) from the first mode and entry into the second mode at the initiation of a user input and to perform the first function at the completion of the user input wherein the exit from the first mode occurs before discrimination of the user input (column 10 lines 31-57, column 12 line 56 to column 13 line 19).

It would have been obvious to one of ordinary skill in the art to recognize that the keyboard exit into working mode as soon as a keystroke signal is detected. Note that it is obvious that to mode switching it is an indiscriminate keystroke because any keystroke signal can wake up the keyboard. And the keyboard has to wake up first to operate and to discriminate user's input at keystroke completion, which makes keystroke determination and discrimination occurs after the exit from the first mode.

Regarding claim 18, Barrus et al. teach a method of transferring a user input device (keyboard), in response to user input, from a first mode (sleep mode) in which the device is not capable of performing a first function (output user's input) to a second mode (active/working mode) in which the device is capable of performing a first function (determine and transmit) where there is an inherent delay in the transferring, comprising:

Art Unit: 2618

detecting the initiation of user input and then immediately initiating a transfer from said first mode to said second mode (column 10 lines 31-41, where the keyboard exit to working mode as soon as a keystroke signal is detected);

discriminating an instantaneous user input from a continuous user input after the transfer from the first mode to the second mode has been initiated (column 10 lines 31-57, column 12 line 56 to column 13 line 19, where it would have been obvious to one of ordinary skill to recognize the keyboard starts discriminating a user input after entering working mode since the wake up needs only an indiscriminate keystroke signal);

detecting the completion of the user input and performing the first function (column 10 lines 31-57).

Note the keyboard has already started performing a function (such as to output the input from user) since it started measuring the relative time period a particular key has been depressed.

Regarding claim 22, Barrus et al. teach a touch-entry user input device having a first mode (sleep mode) in which the device does not perform a first function (output user's input) and a second mode (active/working mode) in which the device does perform the first function wherein the device has means for user input and is arranged, when in the first mode, to initiate exit (wake up) from the first mode and entry into the second mode at the initiation of a user input and to perform the first function at the completion of the user input wherein the exit from the first mode occurs before discrimination of the user input (column 10 lines 31-57, column 12 line 56 to column 13 line 19, as explained in responses to claims 1 and 18).

Art Unit: 2618

Regarding claim 2, Barrus et al. teach the limitation of claim 1.

Barrus et al. teach comprising a processor (microcontroller) for detecting the initiation of a user input and a processor (microcontroller) for initiating the exit from the first mode (column 10 lines 36-39).

Regarding claim 3, Barrus et al. teach the limitation of claim 1.

Barrus et al. teach the first mode is an energy conservation mode (sleep mode).

Regarding claims 5 and 19, Barrus et al. teach the limitations of claims 1 and 18.

Barrus et al. teach wherein user input is performed by depressing a user depressible key (keyboard input).

Regarding claims 6 and 20, Barrus et al. teach the limitations of claims 5 and 19.

Barrus et al. teach further comprising the step of discriminating an instantaneous depression of the key from a continuous depression of the key (column 12 line 56 to column 13 line 19).

Regarding claim 8, Barrus et al. teach the limitation of claim 1.

Barrus et al. teach the entry into the second mode occurs before discrimination of the user input (column 10 lines 39-41).

Regarding claim 16, Barrus et al. teach the limitation of claim 1.

Art Unit: 2618

Barrus et al. teach wherein the time taken to exit from the first mode and enter into the second mode is less than the time taken to discriminate a user input (column 10 lines and column 12 line 56 to column 13 line 19, wherein the discriminating process obviously takes a certain time period and comparison).

4. Claims 4 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrus et al. (US Patent#5410305) in view of Wright (US Patent#6912605).

Regarding claim 4, Barrus et al. teach the limitation of claim 1.

But, Barrus et al. do not expressly disclose the second mode is a low power radio communication mode.

Wright teaches a wireless keyboard having a second mode in a low power radio communication mode (column 5 lines 43-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wireless mode taught by Wright into the device of Barrus et al., in order to provide convenient wireless connection.

Regarding claim 9, Barrus et al. teach the limitation of claim 1.

But, Barrus et al. do not expressly disclose further comprising low power radio transceiver means and wherein the exit from the first mode is initiated by sending a message using the low power radio transceiver means.

Art Unit: 2618

Wright teaches a wireless keyboard comprising low power radio transceiver means (inherent in wireless keyboard) and wherein the exit from the first mode is initiated by sending a message using the low power radio transceiver means (column 5 lines 40-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wireless mode taught by Wright into the device of Barrus et al., in order to provide convenient wireless connection.

Regarding claim 10, Barrus et al. teach the limitation of claim 1.

Barrus et al. also teach transmitting data (column 10 lines 42-57).

But, Barrus et al. do not expressly disclose further comprising low power radio transceiver means wherein the first function comprises transmitting data using the low power radio transceiver means.

Wright teaches a wireless keyboard comprising low power radio transceiver means wherein the first function comprises transmitting data using the low power radio transceiver means (column 5 lines 40-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wireless mode taught by Wright into the device of Barrus et al., in order to provide convenient wireless connection.

5. Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrus et al. (US Patent#5410305) in view of Kammer et al. (US Patent#6950645).

Art Unit: 2618

Regarding claim 11, Barrus et al. teach the limitation of claim 1.

But, Barrus et al. do not expressly disclose operating as a Slave in a Bluetooth piconet.

Kammer et al. teach a wireless keyboard operating as a slave in Bluetooth piconet (column 6 line 62 to column 7 line 24).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a wireless keyboard operating as a slave in Bluetooth piconet taught by Kammer et al. into the touch-entry user input device of Barrus et al., in order to provide personal wireless connection.

Regarding claim 12, Barrus et al. teach the limitation of claim 1.

But, Barrus et al. do not expressly disclose operating in accordance with the Bluetooth Standard wherein the first mode is the Sniff Mode or Park Mode.

Kammer et al. teach operating in accordance with the Bluetooth Standard wherein the first mode is the Sniff Mode or Park Mode (column 8 lines 4-27).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a wireless keyboard operating in Bluetooth Standard wherein the first mode is the Sniff Mode or Park Mode taught by Kammer et al. into the touch-entry user input device of Barrus et al., in order to have power saving mode with wireless connection.

Regarding claim 13, Barrus et al. and Kammer et al. teach the limitation of claim 12.

Kammer et al. further teach the exit from the Sniff Mode is initiated by transmitting a LMP_unsniff_req message (inherent in column 8 lines 4-19).

Regarding claim 14, Barrus et al. and Kammer et al. teach the limitation of claim 12.

Kammer et al. further teach the exit from the Park Mode is initiated by transmitting a LMP_accepted message (inherent in column 8 lines 4-19).

Regarding claim 15, Barrus et al. teach the limitation of claim 1.

But, Barrus et al. do not expressly disclose operating in accordance with the Bluetooth Standard wherein the second mode is the Active Mode.

Kammer et al. teach having wireless devices operating in accordance with the Bluetooth Standard wherein the second mode is the Active Mode (discoverable mode, column 7 lines 9-19, column 12 line 59 to column 13 line 35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Bluetooth wireless usage taught by Kammer et al. into the device of Barrus et al., in order to provide personal wireless connection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zhiyu Lu whose telephone number is (571) 272-2837. The examiner can normally be reached on Weekdays: 9AM-5PM.

Art Unit: 2618

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zhiyu Lu
September 5, 2007


NAY MAUNG
SUPERVISORY PATENT EXAMINER